



FLWEMS Paramedic Medication Information For:

THIAMINE HYDROCHLORIDE

(Vitamin B₁)

(THIGH-ah-min)

Pregnancy Category

A (parenteral use; C if doses > RDA used) Thiamilate (Rx: Injection; OTC: Tablets)

Action/Kinetics

Water-soluble vitamin, stable in acid solution. Decomposed in neutral or acid solutions. Required for the synthesis of thiamine pyrophosphate, a coenzyme required in carbohydrate metabolism. The maximum amount absorbed PO is 8-15 mg/day although absorption may be increased by giving in divided doses with food.

Uses

Prophylaxis and treatment of thiamine deficiency states and associated neurologic and CV symptoms. Prophylaxis and treatment of beriberi. Alcoholic neuritis, neuritis of pellagra, and neuritis of pregnancy. To correct anorexia due to thiamine insufficiency. *Investigational:* Treatment of subacute necrotizing encephalomyelopathy, maple syrup urine disease, pyruvate carboxylase deficiency, hyperalaninemia.

Special Concerns

Use with caution during lactation.

Side Effects

Serious hypersensitivity reactions, including anaphylaxis; thus, intradermal testing is recommended if sensitivity is suspected. *Dermatologic:* Pruritus, urticaria, sweating, feeling of warmth. *CNS:* Weakness, restlessness. *Other:* Nausea, tightness in throat, *angioneurotic edema* cyanosis, *hemorrhage into the GI tract, pulmonary edema, CV collapse. Death has been reported. Following IM use:* Induration, tenderness.

Drug Interactions

Thiamine is unstable in neutral or alkaline solutions; do not use with substances that yield alkaline solutions, such as citrates, barbiturates, carbonates, or erythromycin lactobionate IV.

How Supplied

Enteric Coated Tablet: 20 mg; *Injection:* 100 mg/mL; *Tablet:* 50 mg, 100 mg, 250 mg, 500 mg

Dosage

•Tablets, Enteric-Coated Tablets *Mild beriberi or maintenance following severe beriberi.*

Adults: 5-10 mg/day (as part of a multivitamin product); infants: 10 mg/day.

Treatment of deficiency.

Adults: 5-10 mg/day; pediatric: 10-50 mg/day.

Alcohol-induced deficiency.

Adults: 40 mg/day.

Dietary supplement.

Adults: 1-2 mg/day; pediatric: 0.3-0.5 mg/day for infants and 0.5 mg/day for children.

Genetic enzyme deficiency disease.

10-20 mg/day (up to 4 g/day has been used in some clients).

•Slow IV, IV *Thiamine deficiency.*

Doses as high as 100 mg/L of fluid as rapidly as possible until deficiency is corrected.

Wet beriberi with myocardial failure.

Adults: 10-30 mg t.i.d.

Infantile beriberi.

25 mg if collapse occurs.

Wernicke-Korsakoff syndrome.

Initial: 100 mg IV; then 50-100 mg IM until client is consuming a regular, balanced diet.

Marginal thiamine status in those receiving dextrose.

100 mg in each of the first few liters of IV fluid to avoid precipitating heart failure.

•IM *Beriberi.*

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10-20 mg t.i.d. for 2 weeks. Give a PO multivitamin product containing 5-10 mg/day thiamine for 1 month to cause body saturation.

Neuritis of pregnancy.

5-10 mg/day if vomiting is severe enough to preclude PO therapy.

Recommended dietary allowance.

Adult males: 1.2-1.5 mg; adult females: 1.1 mg.

END OF INFORMATION – NOTHING FOLLOWS